

Fluoride in Stack Samples

Distill Date: 6/3/20

Distilled by: JS/AP

Curve Date: 6/3/20

Analyzed by: JS/AP

Standards		
Abs.	µg of F per 50 ml	fit
0.000	0	0.03152
-0.034	10	10.03853
-0.067	20	19.75122
-0.102	30	30.05256
-0.137	40	40.3539
-0.169	50	49.77226

Linear Regression	
-294.3239	slope
0.0315	intercept
-0.9999	correlation (*R)

Enter start date of runs: 5/21/2020

Enter first run number: 1

Enter lowest number of flasks: 1

ALIQUOTS AND CONVERSIONS										
Sample Identification	Start Date	Abs.	Curve Aliquots (ml)	µg of F per 50 ml	Starting Volume (ml)	Distill. Aliquot (ml)	To Volume (ml)	Conversion	Fluoride (grams)	Average
Distillation Blank	6/3/20	-0.010	25	3.0	1000	50	250	2.00E-04	0.00059	
ERA Fluoride S274-698	6/3/20	-0.106	25	31.2	1000	50	250	2.00E-04	0.00625	in spec
Actual Value 6.21 mg	0.00621 g ± 10% (Acceptable Range) (0.00559 - 0.00683)									
CB 7 run 1 A gas	5/21/20	-0.041	25	12.1	1000	100	250	1.00E-04	0.00121	
Dup run 1 B Within 2	5/21/20	-0.044	25	13.0	1000	100	250	1.00E-04	0.00130	0.00126
CB 7 run 1 part	5/21/20	-0.151	20	44.5	100	50	250	2.50E-05	0.00111	
CB 8 run 2 gas	5/21/20	-0.050	25	14.7	1000	100	250	1.00E-04	0.00147	
CB 8 run 2 part	5/21/20	-0.058	25	17.1	100	50	250	2.00E-05	0.00034	

* R Value must be ≥ 0.9996 . No more than one standard may be dropped.

** Samples below 20 µg/50 ml must have a 25 ml aliquot.

*** Spadns on the same distilled sample must read ± 1.0 µg (same chemist) or ± 1.5 µg (between chemists).

**** Separate distillations of the same sample must be ± 2.0 µg.

***** Recovery checks on pipetted standards must be 96%-102% for an individual run or 98%-102% for an average of 5 or more runs.

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Area		Spectrophotometer Used		µg F per 50 ml	Absorbance @ 570 nm Read until two in a row are within .001 First Run / Second Run	
Date Distilled:	V-1200			Absorbance on RB1 before zeroing. 1.150		
6/3/20				Reagent Blk 1	0.000 0.000 / 0.000 0.000	
Distilled by: JS/AP	Date 0.05 mg/ml F std made:			Reagent Blk 2	0.002 0.002 / 0.000 0.000	
				10	-0.034 -0.033	
Date Curve Read:	Make fresh every 3 mo.			20	-0.067 -0.067 / -0.069 -0.069	
6/3/20	Date 1.0 mg/ml F std made:			30	-0.103 -0.102	
Spadns by: JS/AP				40	-0.138 -0.136 -0.137	
Room Temp: _____	Make fresh every 6 mo.			50	-0.169 -0.169	
25 °C Bath Temp.				Reagent Blk 1	0.000 0.000	
Orig. Vol. (ml)	Dist. Aliq. (ml)	Sample Identification	Date	Absorbance First Run / Second Run		Curve Aliquot (ml)
Dist Blk	1000	50	Distillation Blank	6/3/20	-0.011 -0.010	25
Std	1000	50	ERA Fluoride S274-698	6/3/20	-0.104 -0.106 -0.106	25
11G	1000	100	CB 7 run 1 A gas	5/21/20	-0.038 -0.038 / -0.041 -0.041	25
Dup	1000	100	Dup run 1 B gas	5/21/20	-0.048 -0.048 / -0.044 -0.044	25
11P	100	50	CB 7 run 1 part	5/21/20	-0.150 -0.151	20
12G	1000	100	CB 8 run 2 gas	5/22/20	-0.049 -0.050	25
12P	100	50	CB 8 run 2 part	5/22/20	-0.057 -0.058	25
Reagent Blank 1					0.000 0.000 / 0.000 0.000	

* Zero abs. before and after reading standards and samples. If abs. is off by more than 0.003, rezero and read the stds or samples again. If abs. is with 0.003, rezero and continue.

** Samples below 20 µg/50 ml must have a 25 ml aliquot.

*** Spadns on the same distilled sample must read ± 1.0 µg (same chemist) or ± 1.5 µg (between chemists).

**** Notify supervisor if abs. of distillation blank is less than -0.020.

***** Separate distillations of the same sample must be ± 2.0 µg.